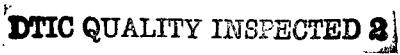
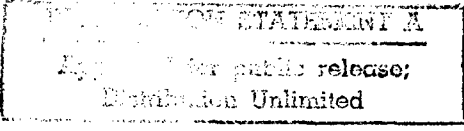


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OUTPATIENT PREOPERATIVE EDUCATION NEEDS IDENTIFIED BY NURSES AND  
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THESIS

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The University of Texas Graduate School of Biomedical Sciences

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By

Cheryl Anne Reilly, B.S.N.

San Antonio, Texas

May, 1998

OUTPATIENT PREOPERATIVE EDUCATION NEEDS IDENTIFIED BY NURSES AND  
PATIENTS

Cheryl Anne Reilly

APPROVED:

Nancy Girard  
Supervising Professor

Mary L. Pyle

Olivia Danna

21 April 98  
Date

APPROVED:

Sanford A. Miller  
Sanford A. Miller, Ph.D.  
Dean

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OUTPATIENT PREOPERATIVE EDUCATION NEEDS IDENTIFIED BY NURSES AND  
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Publication No. \_\_\_\_\_

Cheryl Anne Reilly, M.S.N.

The University of Texas Graduate School of Biomedical Sciences  
at San Antonio

Supervising Professors: Nancy Girard, R. N. , Ph. D.  
Mary Heye, R. N. , Ph. D.  
Anne Garner, R. N. , Ph. D.

The benefit of preoperative teaching is consistently supported in nursing and medical literature however, few studies have been done to examine and compare the content of

preoperative teaching patients and nurses believe is important. Yount and Schoessler (1991) conducted a study to examine patient and nurse perceptions of preoperative teaching in an inpatient setting. Brumfield, Kee, & Johnson (1996) replicated their study methods and extended it to ambulatory surgery patients scheduled for laparoscopic procedures. This thesis study also replicates Yount and Schoessler's study methods and extends it to patients having a variety of ambulatory surgery procedures.

This descriptive, survey design thesis study examined the similarities and differences between ambulatory surgery patient and nurse perceptions of the importance of specific types of preoperative teaching categorized by five dimensions of preoperative teaching. Recognizing the preoperative teaching that patients believe is important is the key to providing meaningful learning experiences for patients undergoing ambulatory surgery.

A convenience sample of 45 patients and 54 nurses was selected from a military medical center in the southwestern part of the United States. Each of the subjects completed a slightly modified version of the Perceptions of Preoperative Teaching Questionnaire developed by the nursing research committee at Providence Medical Center, Portland, Oregon. The patient questionnaire asked patients to rate the importance of each item and also asked if they received that type of information before they had surgery.

Results indicate no significant difference between nurse and patient perceptions of preoperative teaching except for the skills training dimension ( $p=.027$ ). Patients believed most types of preoperative teaching to be "important" (rating of 4) or "most important" (rating of 5) with the exception of the skills training dimension which was the only dimension mean below

“4”. The nurse mean ratings ranged from 3.89 to 4.41. All means except the sensation discomfort dimension were four or higher indicating that nurses also believe that most types of preoperative teaching are “important” or “most important”. There were two other significant findings. Chi Square analysis indicated a significant relationship between the patient receiving teaching about a particular item and the importance rating for all except for 10 of the 62 items on the preoperative teaching questionnaire. A higher percentage of patients who the received teaching rated the item as “important” or “most important” than did those patients who did not receive the teaching. There was also a significant correlation ( $p=.027$ ) between the patients level of education and their mean rating of the skills training subscale. Patients with higher levels of education tended to give items in the skills training dimension a lower importance rating.

Effective preoperative teaching leads to positive postoperative outcomes. Nurses must continue to explore methods to improve the teaching they provide and increase patient awareness of the importance of information that is meaningful to their recovery. This teaching must also be designed with careful attention to identification and inclusion of information patients consider important to their recovery.



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## **I. INTRODUCTION**

### **Overview**

Rapid changes in the health care system make it imperative for nurses to actively seek innovative ways to maintain and improve the quality of care patients receive. Quality of care can be measured by outcomes that are a result of patient education. The emphasis on ambulatory surgery and the accompanying minimum lengths of stay for surgery patients make it more difficult for nurses to assess the needs of their patients and provide appropriate education. Sixty percent of all surgical procedures performed in 1992 were performed on an outpatient basis. By 2010 this figure is projected to increase to 75% (Ladden & Keane, 1995). This means that nurses have less time to prepare the patient for the surgical experience and convalescence. In addition, the "move them in", "move them out" routine may perpetuate insensitivity to patients, decrease patient education, and distance nurses from realizing what is most important to their patients.

The Joint Commission on Accreditation of Healthcare Organizations Standards (JCAHO) (1997) state the goal of patient education is to improve patient health outcomes. Effective education promotes healthy behaviors, maintains wellness, and aids recovery. The patient has a right to information regarding the surgical procedure and potential physical and psychological effects (Association of Operating Room Nurses Inc., 1996). Research findings have demonstrated that preoperative education is beneficial to patients. A meta-analytical study by Hathaway (1986) concluded that preoperative instruction has a positive effect on postoperative outcomes.

### **Significance of Study**

The Association of Operating Room Nurses (AORN) Standards and Recommended Practices state that perioperative nurses must maintain competency in patient and family teaching. The criteria for this competency includes identification of teaching needs and provision of instruction based on those needs (Association of Operating Room Nurses Inc., 1996). To provide appropriate preoperative education, the nurse must be aware of, and sensitive to, the type of preoperative information the patient believes is important. Few studies describe the content of preoperative teaching considered important to patients and nurses in the ambulatory surgery setting (Brumfield, Kee, & Johnson, 1996). Are nurses providing preoperative education based on what patients really want to know, or are nurses providing this education based on what they, rather than patients, believe is important? To effectively provide preoperative teaching, there must be congruence between what patients want to know and what nurses believe is important to teach, especially when time is limited.

There are numerous patient education methods described in the literature. Video tapes, pamphlets, off-site visits by hospital staff, and formal education programs are just a few that are discussed (Brumfield et al., 1996). One institution developed a formal education program designed specifically for the ambulatory surgery patient (Heinen & Paul, 1992). The program is offered once a month, and all patients scheduled for ambulatory surgery are invited.

There are several anecdotal articles describing patient education in the ambulatory setting (Burden, 1994; DeMuth, 1989; Haines, 1992; Heinen & Paul, 1992). Yount & Schoessler (1991) described patient and nurse perceptions of preoperative teaching in an inpatient environment. Brumfield et al. (1996) replicated their study in the ambulatory setting using only patients having

laparoscopic procedures. This thesis study replicated these study methods and extended it to patients scheduled for a variety of ambulatory surgery procedures.

Evaluation of common learning needs of the ambulatory surgery patient population is essential to fostering positive postoperative outcomes. Learning is enhanced when the need is personally identified and the material is meaningful. As patient advocates and educators, nurses must seek ways of identifying the type of preoperative information patients believe is important to facilitate their progression through the surgical process and post operative recovery. This area of study requires further investigation in the ambulatory surgery arena therefore, this thesis study was designed.

### **Problem Statement**

Preoperative patient teaching is based on what nurses believe is important and may not include information the patient believes is most important.

### **Research Question**

Is there congruence between the preoperative teaching ambulatory surgery patients think is important to receive and the preoperative teaching nurses believe is important to provide?

### **Aims**

1. Describe preoperative teaching that the patient believes is important to receive before ambulatory surgery.
2. Describe preoperative teaching that the nurse believes is important to provide patients before ambulatory surgery.
3. Describe differences and similarities between the patients' and nurses' perceptions of what is important in preoperative teaching (as indicated from responses to items on the preoperative teaching questionnaire).

## **Definitions**

Preoperative teaching is defined as providing the patient with general knowledge of surgical information, psychosocial support, and the opportunity to learn selected skills (Yount & Schoessler, 1991). Five dimensions of preoperative teaching are identified within the three general areas. The five dimensions are defined as: (Yount and Schoessler, 1991)

1. Situational information includes explanations about nursing care activities, equipment, and the events patients will experience. This information is reflected on the preoperative teaching questionnaire in items 1, 2, 5, 12, 16, 23, 25, 26, 28, 29, 36, 37, 38, 48, 56, 57, 58, 60, and 61.
2. Sensation discomfort information refers to descriptions of what patients will feel during the perioperative period. This information is reflected on the preoperative teaching questionnaire in items 11, 22, 27, 32, 35, 39, 40, 41, 42, 43, 44, 46, 51, 54, and 55.
3. Role information relates to the behaviors the are expected of the patient to achieve treatment goals. This information is reflected on the preoperative teaching questionnaire in items 3, 4, 6, 10, 15, 49, 50, 53, 59, and 62.
4. Psychosocial support includes patient-nurse interactions that enable patients to handle anxiety and enhance coping skills. This information is reflected on the preoperative teaching questionnaire in items 8, 9, 13, 14, 21, 24, 30, 31, 33, 34, 45, and 47.
5. Skills training involves explanations and guided practice of skills to help patients during postoperative recovery. Coughing and deep breathing instruction and practice of that skill is an example of skills training. This information is reflected on the preoperative teaching questionnaire in items 7, 17, 18, 19, and 20.



Ambulatory surgery includes surgical procedures that require less than 24 hours duration from admission to discharge.

Importance implies significant worth or consequence (Merriam-Webster's Collegiate Dictionary, 1993). In this thesis study, importance is measured on a Likert type scale from 1 to 5 with 5 being the most important and 1 being not at all important.

### **Assumptions**

1. All surgical patients receive some type of preoperative teaching from various sources in the perioperative setting.
2. All surgical patients want some type information about their surgical procedure.
3. Meeting patients' educational needs has a positive impact on postoperative recovery and stress relief.
4. Post ambulatory surgical patients are able to identify information they consider most important to receive before surgery.

### **Limitations**

1. The sample is limited to a convenience sample from one military facility.
2. Only those willing to participate completed the study.

## **II. THEORETICAL FRAMEWORK AND REVIEW OF LITERATURE**

### **Theoretical Framework**

The key component in preparing to work with adult learners is understanding how they learn best (Merriam & Caffarella, 1991). Understanding who adult learners are and why they participate in learning are important to consider in providing meaningful learning experiences. Preoperative teaching for adult patients should be planned based on adult learning principles.

Merriam & Caffarella (1991), quoting Hergenhahn, define learning as a "relatively permanent change in behavior or in behavioral potentiality that results from experience and cannot be attributed to temporary body states such as those induced by illness, fatigue, or drugs (p. 124). They take this a step further to also describe learning as a process that focuses on what happens when learning takes place. The explanations of what happens are called learning theories. There is no one theory of adult learning to guide practice decisions (Gessner, 1989; Merriam & Caffarella, 1991). Most authors agree that it is not likely that there will ever be a single theory of adult learning that addresses all components. The focus of adult learning is often guided by principles of learning rather than by one specific theory.

Behaviorists conclude that people learn through the transfer of knowledge from one situation to another (Moss, 1994). Knowledge gained from an earlier situation can be applied to the current situation. Learning that occurs through change in motivation, perception, social milieu, and voluntary body function falls into the cognitivists' domain. Humanists believe learning to be a natural event promoted by an optimal environment (Moss, 1994).

Andragogy, the art and science of helping adults learn, was developed by Malcolm Knowles (Knowles, 1984). He believes that a nonthreatening climate conducive to learning must

be established, and the information to be taught must be immediately useful. Knowles also believes that adult learning outcomes are based on solving real life problems and getting immediate results (Moss, 1994). Merriam & Caffarella (1991), citing Jarvis, propose that adults learn when faced with an environment or situation with which they are unable to cope.

Moss (1994) identifies three factors that facilitate learning: motivation, readiness, and feedback. The desire to learn (motivation) is highest when a need is personally identified. When the pupil has a genuine desire to learn and the material is meaningful, learning is enhanced. Readiness refers to motivation to learn at a specific time. The learner must be physically and emotionally ready to receive information. Feedback is information and support given to the learner by the educator or other students. Feedback helps the learner recognize progress toward the desired goal. "Immediate feedback increases motivation" (Moss, 1994, p. 115). These factors identified by Moss (1994) that facilitate learning may influence the degree of importance a patient places on preoperative information provided or not provided by a health care professional.

The andragogical model assumes that adults are ready to learn when "they experience a need to know or do something to perform more effectively in some aspect of their lives" (Knowles, 1984, p. 11). Adults who do not perceive a need to know something may not want to learn. Some surgical patients prefer to hear only the basics because the more information they receive, the more anxious or fearful they become. The stress of illness alone may influence an individual's desire to learn. Timing may also play a large role in whether or not an adult wants to learn. When pain, fatigue, anger, anxiety, fear, and visual or audio impairment are present the individual may not be receptive to any type of teaching and the learning process is hindered (Moss, 1994). Language barriers are also a factor to consider when assessing the adult's desire

to learn. Lack of educator preparation, use of unfamiliar terminology, and not answering the individual's initial questions may cause learners to become disinterested and severely influence the individual's motivation to learn.

In this thesis study, Knowles's andragogical model, and Moss's learning principles serve as a framework for preoperative teaching with adult surgical patients (Appendix A). Patients facing surgery may have difficulty coping with the situation and require teaching to solve this real life problem. Their motivation may be high to learn certain concepts about their surgery and recovery. Who decides what the learning opportunities for patients undergoing surgery should be? Identification of preoperative teaching items necessary for facilitating positive postoperative outcomes tend to be selected by those who have a value perspective not necessarily shared by the patient. Adults will not actively participate in the learning process if the learning activities are not responsive to their needs (Merriam & Caffarella, 1991). According to the literature, teaching must be meaningful to the patient for learning to take place. Investigating the importance of specific preparatory information will help guide the health care team in providing meaningful learning experiences for the ambulatory surgery patient.

## **Review of Literature**

### **Preoperative Teaching**

The benefit of preoperative teaching is consistently supported in nursing and medical research literature. Numerous studies indicate that preoperative teaching reduces postoperative recovery time, postoperative complications, increases patient satisfaction and compliance with treatment regimes.

A meta-analytical study (Hathaway, 1986) examined the extensive existing body of research that explored the effects of preoperative instruction on postoperative outcomes. Sixty

eight studies representing 2,413 experimental subjects and 1,605 control group subjects were examined. Substantive aspects of studies were examined by analyzing the type of preoperative interventions considered in each study. The investigator concludes that 67% of patients receiving preoperative teaching have more favorable outcomes and their outcomes are 20% better than those not receiving preoperative teaching. The researcher goes a step further to suggest that a preoperative teaching program should include identification of patients' learning needs and instruction directed toward meeting those needs. This meta analysis speaks to learning needs of patients and highlights studies done to support preoperative teaching. This thesis study was designed to pursue identification of learning needs from the patient's perspective in an attempt to create preoperative teaching programs to meet those needs and further influence outcomes.

Devine, O'Connor, Cook, Wenk, & Curtin (1988) coined the term psychoeducational care to research psychological and educational interventions on postoperative patients. They designed a study to determine whether the beneficial effects of psychoeducational care noted in past research would continue to benefit patients in the post-DRG environment. A three-hour workshop for staff nurses on providing patient education and psychological support was evaluated for its effects on patient welfare and recovery. Surgical patients hospitalized during the six months prior to the workshop and surgical patients hospitalized during the seven months after the workshop were compared using the following outcome indicators: postoperative length of hospital stay, the use of analgesics, use of sedative, antiemetic, and hypnotic medications. Three hundred fifty four adult, elective surgical patients ranging in age from 18-90 years, participated in the study. One hundred forty eight patients formed the experimental group and the control group contained 206 patients. The outcome indicators were measured using

retrospective chart audit. After the workshop, experimental subjects used fewer sedatives, antiemetics, and hypnotics, and were discharged an average of half a day sooner.

The investigators conclude that a few hours of inservice education regarding preoperative education can have beneficial effects on patients' welfare and recovery. It is difficult to generalize these findings further than the study sample since only one hospital was involved. The outcome indicators are narrow in focusing only on length of stay (LOS) and the use of medication. Other indicators such as, incidence of postoperative infection and time needed to return to normal activities, might provide additional support for psychoeducational care. The researchers recognize the importance of developing a program that includes the most effective components of psychoeducational care and omits the less effective components. This thesis study is an initial step in determining effective components by assessing what patients and nurses believe to be important preoperative information.

Other studies have examined the impact of preoperative teaching on specific patient populations. Lichtenstein, Semaan, & Marmar (1993) developed a hospital-based education program for patients having knee or hip replacement surgery. The program consisted of a one hour preoperative education session, a discussion by previous patients addressing unnecessary fears, and an elective membership, after discharge, in a support group that provided information on how to live with arthritis and new joints. The goal of the program was to improve medical and functional outcomes of patients who had knee or hip replacement surgery.

The impact of the program on two outcome measures was investigated through a five year retrospective study. The first outcome was patients' perceptions of the program and the second was patients' perceptions of the outcome of surgery. The first outcome measure was further divided into two domains. The first domain assessed patients' perceptions of how helpful

the program was in preparing them for surgery and categorized responses as helpful or not helpful. The second domain assessed problems encountered at home that were detrimental to recovery and not covered by the program. Responses in this domain were categorized as yes or no. The data on both domains was collected two months after surgery. Data on patients' perceptions of the outcome of surgery was collected using six domains: ability to function, functioning level, patient perception of health status, back to normal functioning as patient expects, exercise as recommended by physical therapist, and has had follow-up visit with surgeon as suggested. Data was collected for one year following surgery with specific data collection points at two months, six months, and one year following surgery. The sample consisted of 535 patients. Two hundred fifteen had hip replacement surgery and 320 had knee replacement surgery. The results of this study indicated highly positive outcomes. Ninety percent of the patients indicated the program was helpful in preparing them for surgery and their home discharge needs. The rate of compliance with medical advice was high and patient perceptions of their functioning level also indicated positive outcomes. All patients who underwent knee or hip replacement in the study hospital took part in the educational program. There was no control group to compare differences in outcomes. It is also possible that more patients who felt positive about their experiences responded to the survey and phone calls than did those who had negative experiences.

Allen, Knight, Falk, & Strang (1992) conducted a pretest-posttest control group study to determine the effect of a preoperative teaching program on cataract patients' knowledge, skill, and anxiety. Fourteen men and 22 women participated in the study. Subjects were administered the questionnaires prior to receiving the one and one half hour home care preoperative teaching program. In addition to the preoperative teaching program, all patients, including the control

group, received the routine teaching done by the ophthalmologist and hospital nurses. The results of this study indicated no statistically significant difference between the experimental and control group on knowledge, skill, and anxiety. There was however, a significant difference between experimental group pretest and posttest knowledge and skill scores. The control group had a significant difference in pretest and posttest skill and anxiety scores. The anxiety scores for the experimental group were lower postoperatively but not significantly lower. Although this study did not indicate significantly different results between the control group and experimental group, it does support the idea that preoperative education provides positive gains in knowledge about self care activities following cataract surgery regardless of the site and timing of teaching.

Stress, coping, patient satisfaction, the need to maintain control, and quality care are areas that examine the issue of preoperative teaching. Caldwell (1991) describes a research study that examined how preferences for information and self-care influences preoperative stress and coping. Data was collected, by interviews and questionnaires, from 69 adult patients having outpatient surgery for the first time. The researcher concludes that preference for information has an influence on anxiety in the immediate preoperative period. Those subjects with a high preference for information experienced less preoperative stress. Specific information, when given to those with high preference for information, and general information when given to those with less preference for information, results in better outcomes (Caldwell, 1991). Preoperative education given to patients with a low desire for information may actually increase their perceptions of stress. This raises the question: what is the "right" amount of information. The investigator believes further clarification of this area is necessary to recommend changes in clinical practice. Very often, healthcare professionals assume they know what type and how much preoperative information patients need. A research study examining the issue of



preoperative teaching needs identified by patients versus those identified by nurses is a step toward answering the question of what type and how much information to provide patients.

Johnson, Christman, & Stitt (1985) used a randomized 2 x 3 x 2 factorial design to evaluate short- and long-term effects of interventions that provided different means of exerting personal control over postoperative experiences. The sample consisted of 121 black and 47 white hysterectomy patients at a large inner city hospital in the great lakes region. One of the variables studied was the presence or absence of the description of the experience in concrete sensory terms. Concrete sensory terms focus on objective elements of the experience such as, when events will occur, how long they will last, and what will be seen, heard, smelled, tasted, or felt during the event. In their review of the literature, three other studies were cited supporting the idea that preparatory information focusing on the concrete sensory elements is associated with a more rapid resumption of usual activities. In this 1985 study the investigators expected concrete sensory information to "increase patients' confidence in existing coping abilities, foster versatility in use of coping strategies, and lead to an early resumption of usual life activities" (Johnson et al., 1985, p. 132). This hypothesis was supported by self-report data on coping processes. Patients' perceptions of their ability to deal with the experience increased when sensory information was provided.

Dennis (1990) replicated and extended her earlier study on the types of activities that contribute to patients' sense of control during their hospitalization. A sense of control plays a key role in decreasing stressful reactions to invasive procedures such as surgery. Dennis believes that perceived or actual control over their experiences may help patients see their situation in a less threatening way. Thirty medical-surgical patients from a large tertiary care facility participated in the study. Initially the investigator used the Client Control Q-Set tool to identify

the importance patients placed on controlling situations and events that take place during hospitalization. Next, an interview was conducted by the investigator to discuss the thoughts and reasons which influenced patients' particular sorting of items as most important, most unimportant, and neutral. The Health Opinion Survey was used to identify patients' preferences for active and informed versus inactive and less informed roles in their health care. The results yielded a strong similarity across all samples for the importance patients place on having information regarding their hospitalization. Understanding their diagnosis, treatment, and the lifestyle implications of their disease process were central to patients' cognitive control.

Patient education has also been used as an indicator of quality. Icenhour (1988) designed a study using patient perceptions of ambulatory surgery to measure the outcome and quality of teaching and emotional support in two different ambulatory surgery settings. One hundred fifty ambulatory surgery patients at the two sites participated in the study. An interview method was used to measure the quality of interpersonal care. The interviews lasted 30 to 35 minutes and measured emotional support and patient education. Questions regarding patient teaching included teaching methodology and whether the patient knew the information on discharge orders. There were significant differences between the two sites in the area of patient teaching. Teaching style and timing of education played a role in the patients' knowledge level at time of discharge. Site two did little formal teaching and limited teaching to the distribution of pamphlets. Patients at site two voiced concern about not knowing their postoperative discharge instructions when they were ready to go home. The researcher concluded that variations in interventions have a major impact on the outcomes of care. Professional nurses can provide direction in establishing quality standards by identifying interventions that promote adequate preparatory information.

### **Patient or Nurse Perceptions of Preoperative Teaching**

A few studies have been done that examine patient perceptions of preoperative education or nurses perceptions of patient teaching (Barsevick & Lauver, 1990; Recker, 1994; Yount, Edgell, & Jakovec, 1990). Barsevick and Lauver (1990) designed a study to investigate the specific informational needs of women undergoing colposcopy. The data collected for this study was obtained as part of a larger descriptive study of preference for information, information seeking, and emotional responses to colposcopy. A sample of 43 women participated in the study. The information needs of the women were determined from the spontaneous questions they asked during their clinic visit. The questions were sorted into two categories: questions about the examination and questions about the results. A total of 226 questions were analyzed. Fifty two percent of the questions were exam related and included questions regarding sensations, the procedure, and self care activities. Thirty four percent of the questions focused on the results and included questions regarding the meaning of the results and treatment procedures. The researchers conclude that concrete objective information and self care instruction help reduce the stress associated with an aversive medical procedure. They identified specific areas important to patients, that nurses should include in pre-procedure teaching.

Recker (1994) investigated cardiac surgical patients' perceptions of importance and adequacy of preoperative teaching in relation to the timing of the teaching. A sample of 111 patients were identified for the study with a final sample of 49 patients. A control group consisted of patients who received the standard preoperative teaching the night before surgery. The experimental group received preadmission preoperative instruction 2 to 7 days prior to surgery. The experimental group received a patient education booklet not given to the control group. Three to six days postoperatively, subjects were given a preoperative teaching

questionnaire with eight closed ended questions focusing on the patient's evaluation of explanations of preoperative preparation. Subjects rated the importance of information and the degree to which the information prepared them for surgery, on a 10 point Likert scale. Patients in this study believed that all preoperative information provided was important and they felt adequately prepared for surgery. There was no significant difference between the control group and the experimental group. The investigators conclude that cardiac patients could be admitted the day of surgery provided the preoperative teaching has been completed on an outpatient basis. The researchers did not gain insight into specific teaching desires of these patients or make recommendations to improve preoperative teaching based on their results.

Yount et al. (1990) studied nurses' perceptions of preoperative teaching. The tool used in their study and the current thesis study, was the Perceptions of Preoperative Teaching Questionnaire developed by the investigators. The survey consists of a 73-item questionnaire based on the five types of preoperative teaching: situational information, sensation information, patient role, psychological support, and skills training. The sample consisted of 159 registered nurses employed at a large urban hospital. All nurses, regardless of whether or not they cared for surgical patients were invited to participate.

The purpose of the study was to examine nurses' perceptions regarding preoperative teaching and the optimal time to provide the teaching. Psychosocial support was rated most important and sensation-discomfort information was rated least important. Most of the nurses surveyed chose after admission but before surgery as the optimal time to provide preoperative teaching. The investigators raise the question of whether or not nurses realize and appreciate differences in the types of teaching necessary to provide complete preoperative education. They

also identify an inconsistency between nurses' beliefs and research reports that indicate patients benefit from sensation information.

### **Comparison of Patient and Nurse Perceptions of Patient Teaching**

Very few studies have been done that examine and compare similarities and differences in nurse and patient perceptions of patient teaching to determine the incongruencies. Of the three studies described below, only the last two specifically examine preoperative teaching.

Tilley, Gregor, & Thiessen (1987) designed a study to describe the amount of congruence in the perceptions of 38 matched nurse-patient dyads concerning the role of nurses in patient education. A patient and nurse questionnaire was designed so that each member of the patient-nurse dyad would answer the questions about the specific other and not nurses and patients in general. Six research questions addressed agreement among nurses and patients in the areas of what type and how much patient education nurses perform, patient and nurse satisfaction with the nurse's role in patient education, and understanding of patient desires for education. The following incongruencies were identified:

1. When given a choice of who patients preferred to receive information from, patients chose physicians and nurses chose nurses.
2. Perception of the preferred time to receive information differed. Nurses identified the period of time just before discharge and patients preferred to receive information in the early part of their hospitalization.
3. Patients perceived content that explained experiences and provided a prognosis of what to expect in the future, as useful information.
4. Nurses tended to assume that their desires were shared by the patient. Less than half the nurses in this study understood their patient's desires for information.

In view of these findings it is important for nurses to validate their patients' preferences regarding education, to include educational approaches, timing, and type of information desired. Although the study was done to examine patient education in general, the findings can be applied to specific types of patient education such as, preoperative education.

### **Comparison of Patient and Nurse Perceptions of Preoperative Teaching**

The original study describing patient and nurse perceptions of preoperative teaching on which this thesis study is based was done by Yount & Schoessler (1991). The intent of the researchers was to describe patient perceptions of what teaching was important, nurses perceptions of what teaching was important, and compare the results. The patient sample included 116 inpatients. The surgical procedures represented in this sample fell into one of nine categories. Gynecological and urological surgery were the most frequently reported categories. The nurse sample included 159 hospital employed registered nurses (RN). The nurse sample was not limited to those who cared for surgical patients. Nurses from all areas of the hospital were included in the study.

Both patients and nurses believed psychosocial support to be the most important dimension of preoperative teaching. Nurses and patients did not rate the other dimensions with the same priority. Nurses rated skills training as the second most important dimension and patients rated it as the least important. Both patients and nurses agreed on the timing of preoperative education. Both indicated a preference for receiving or giving information between the time of admission to the hospital and surgery.

In order for preoperative instruction to be effective, nurses must understand what priority patients place on information. Ambulatory surgery patients' experiences are different from those of the inpatient. Nurses and patients involved in ambulatory surgery would benefit from this

study being repeated in the outpatient setting. Also, including nurses from all areas of the hospital could affect the study results if a significant number do not care for surgical patients. These nurses may be unaware of the specific needs of the surgical patient.

### **Patient and Nurse Perceptions of Preoperative Teaching in Ambulatory Surgery**

Brumfield et al. (1996) replicated and extended Yount and Schoessler's (1991) study in the ambulatory surgery setting. Their patient population consisted of 30 patients who underwent laparoscopic surgery. The researchers used the same methods and questionnaire described in the previous study. Results from this study were slightly different from the inpatient study. Patients ranked situational information as the most important dimension of preoperative teaching. Skills training was still ranked as least important. Nurses continued to rank psychosocial support as the most important dimension of preoperative teaching, and sensation discomfort as the least important. No significant differences between nurses and patients were found regarding the preferred timing of teaching. Most patients and nurses agreed that preoperative teaching should be done before admission to the ambulatory surgery unit. This finding is different from those involving inpatients. Patients and nurses in the inpatient setting preferred information during the period of time between admission and discharge.

Situational information may be more important to ambulatory surgery patients since they are not admitted to the hospital for more than 24 hours and personally guided through the process by nurses or other health care professionals. The choice to accomplish preoperative teaching before admission for ambulatory patients makes sense for the same reason situational information is important. Ambulatory surgery patients do not have the time to receive a lot of preoperative teaching between admission and the start of surgery.

This replication and extension study supports the previous research regarding the discrepancy between patient and nurse beliefs regarding preoperative teaching. With all the information described in the literature regarding preoperative teaching, nurses still do not know what type of information is most important to the patient.



### III. METHODS AND MATERIALS

A descriptive, survey design was used in this replication and extension study to investigate what preoperative teaching patients and nurses believe is important to receive. Unlike the original study, this study focused on patients undergoing surgery in the ambulatory surgery setting. This thesis study also further extends the Brumfield et al. (1996) study to include all types of ambulatory surgery rather than restricted to laparoscopic surgery.

#### **Sample**

A convenience sample of 54 nurses and 45 patients was obtained from a military medical center in the southwest. Patient inclusion criteria was as follows:

1. Eighteen years of age or older.
2. Ability to speak, read, and understand English.
3. Alert and oriented.
4. Scheduled for surgery involving no more than a 23 hour hospital stay.

Nurse inclusion criteria:

1. Employed as a registered nurse for a minimum of one year.
2. Work in either an ambulatory surgery unit, preoperative holding area, operating room, surgical patient care unit, or surgical clinic.

Exclusion criteria:

1. Patients undergoing emergency surgery.

#### **Ethical Considerations**

Coordination between military and university review boards was necessary for access to the sample. Approval by the individual department chiefs, nurse managers, and a letter of support

from the medical center nurse researcher was necessary to use ambulatory surgery patients from the military medical center.

The proposal was submitted to the military facility's Clinical Investigations Directorate for review as an exempt protocol, and to the University of Texas Health Science Center at San Antonio (UTHSCSA) Institutional Review Board (IRB). Following review and approval by the military facility IRB, final approval of the proposal by the University of Texas Health Science Center at San Antonio (UTHSCSA) IRB was obtained (Appendix B). After written approval from the Chief, Clinical Investigations Directorate, and the UTHSCSA IRB, the research project was initiated.

Subjects were approached by the investigator and invited to participate in the study. A thorough explanation of the study, along with a written information sheet (Appendix C), was given to each participant. Enough time was allowed for participants to read the information sheet and ask questions. Emphasis was placed on the voluntary nature of their participation. Any decision by the subjects to participate or not participate did not affect the nursing or medical care provided by the institution. Nurse participant decisions to participate or not participate did not affect their employment status. Subjects were told that all responses would be kept confidential and their names would not be connected with the information they provided. Completed surveys were kept in a secure place in the investigator's home. All data is reported as group data for a Master's Thesis. No specific mention of the agency providing the sample is made. It is referred to by its geographical location. The questionnaires subjects were asked to complete contained the following statement: "Completion of this questionnaire indicates your consent to participate in this study" (Appendix D, Appendix E).

## **Procedure**

Meetings with nurse managers from the surgical clinics, ambulatory surgery unit, operating room, and the 24 hour observation unit were arranged to discuss the purpose of the research project. The best means of identifying patient and nurse subjects and the best time to communicate with potential subjects was identified. A copy of the operating room schedule was obtained one day ahead of time to identify potential patient subjects. Potential patient subjects were approached by the investigator preoperatively, after they were admitted to the same day surgery unit, and invited to participate in the study. The investigator informed all subjects of the purpose of the study. If they agreed to participate in the study they were given the patient version of the preoperative teaching questionnaire. The investigator placed a telephone call to each patient subject on the second or third postoperative day to inquire about their recovery and answer any questions about the questionnaire. Patients were asked to complete the questionnaire within the first five postoperative days. A stamped, addressed envelope was provided for the subjects to return the questionnaire to the principal investigator.

After all patients were enrolled in the study and given the questionnaires, nurse subjects were identified. The investigator attended staff meetings on various units to invite nurses to participate in the study. Due to the large volume of nurses working in the operating room, in addition to briefing the nurses at the staff meeting, the information sheet explaining the study was placed in each nurse's mailbox along with the preoperative teaching questionnaire. Nurses were given the questionnaire and asked to complete it within one week and return it to the unit's nurse manager or a designated area on each unit. The investigator returned to the individual units to collect the responses.

Patient and nurse subjects were asked to complete the Perceptions of Preoperative Teaching Questionnaire developed by the nursing research committee at Providence Medical Center, Portland, Oregon (Yount & Schoessler, 1991). Patient subjects were asked to complete the questionnaire first to prevent the Hawthorne Effect. If nurses were asked to answer the questionnaire first, this may influence the way they provide preoperative teaching, and therefore influence patient responses.

### **Tool**

The Perceptions of Preoperative Teaching Questionnaire developed by the nursing research committee at Providence Medical Center, Portland, Oregon (Yount & Schoessler, 1991) was the survey instrument used during the investigation. The instrument is a 73 item paper-and-pencil questionnaire, organized to operationalize the five dimensions of preoperative teaching. Internal consistency reliability coefficients for the instrument range from .82 to .94 for each of the five dimensions of preoperative teaching (Yount & Schoessler, 1991). There are two versions of the instrument. One version is designed for patients and one is designed for nurses. The content of the questions is the same, only the wording is changed to reflect who is answering the question. Subjects are asked to rank each item according to the importance of kinds of preoperative teaching on a 5-point Likert-type scale ranging from "very important" to "not important". Patients were also asked to identify whether or not they actually received teaching for each item on the questionnaire. Although this information does not relate specifically to the research question, it gives valuable information about what teaching patients actually received. Whether or not the patients received specific information may influence their perceptions of its importance. At the end of the questionnaire, seven items, representing different types of preoperative teaching, are listed. Both groups were asked to rank order, from 7 (most important)

to 1 (least important), the importance of each item. Subjects were also asked to indicate at what time each type of teaching would be most beneficial, before admission to the hospital, after admission but before surgery or, at the time the event or procedure occurred.

Patient demographic data including age, sex, years of formal education, occupation, surgical procedure, and whether or not they had surgery within the past five years, was collected. Nurse demographic data collected included age, sex, type of program completed to qualify for registered nurse (RN) licensure, highest degree held, length of time employed as an RN, length of time employed at study facility, job capacity, unit employed on, and percent of time spent caring for surgical patients.

Since this questionnaire was designed for the inpatient setting, some of the items were inappropriate for the ambulatory setting. A panel of four experts in ambulatory surgery and perioperative nursing were asked to rate each item on the questionnaire for content validity. All four experts have a Master's degree in Perioperative Nursing, and one is also a Certified Registered Nurse Anesthetist (CRNA). The experts rated each item appropriate or not appropriate for the ambulatory surgery setting. Items agreed upon by the panel of experts as inappropriate were excluded from the instrument. A total of 10 items were excluded from the revised questionnaire. An initial group of 18 patients were given the questionnaire to determine reliability of the final questionnaire and pilot the protocol. All were asked to comment on the readability of the questions, rating scale, and the understandability of the directions and all responded favorably to all three areas. Two patients wrote comments on their questionnaire that they did not receive the teaching from nurses but received the information from other sources so indicated a "no" in the received teaching column. Upon reviewing the last part of the questionnaire it was found that five patients did not correctly fill out the questions regarding the

rank and preferred time to receive teaching. Two patients did not fill out this section and three completed it incorrectly. Although the original authors recommended eliminating this section from the questionnaire, the decision was made to keep it as part of the tool to further substantiate the value of this information. No identified changes were needed in either the instrument or the protocol. Data collection proceeded for the remainder of the study.

### **Data Analysis**

Descriptive statistics were used to describe and synthesize data collected from the sample. An individual item analysis and an analysis of each of the five dimensions was accomplished. A two-group t-test was used to compare patient and nurse mean importance ratings on the five dimensions of preoperative teaching. The Chi Square test was performed on the individual items on the preoperative questionnaire to compare the frequencies of nurse and patient responses. To examine whether or not receiving teaching on the individual items on the questionnaire had a relationship to the level of importance patients placed on the items, Chi square analysis was used to test for differences in the frequency of patient responses. The Pearson product moment correlation analysis was used to examine the relationships of the demographic characteristics of patients and nurses and their respective mean ratings for each dimension of preoperative teaching.

## IV. RESULTS

### Overview

This chapter will report the results of this descriptive, survey design study in which ambulatory surgery patients and nurses were asked to rate the importance of specific preoperative teaching items. The goal of this study was to find out if there is congruence between the preoperative teaching ambulatory surgery patients think is important to receive and the preoperative teaching nurses believe is important to provide. Patients and nurses were asked to complete the Pre-operative Teaching Questionnaire (Appendix D and E). The items on the questionnaire were divided into the five dimensions of preoperative teaching: situational information, sensation-discomfort information, role information, psychosocial support, and skills training. To obtain scores for each of the five dimensions of preoperative teaching, the mean score of all questions relating to that particular dimension was calculated. The mean for each of the five dimensions of preoperative teaching from the patients' perspective was greater than or equal to 4 for all except the skills training dimension ( $M = 3.63$ ). This means that patients considered skills training less important than the other four dimensions. The mean for all dimensions from the nurses perspective was greater than or equal to 4 in all except the sensation discomfort dimension ( $M = 3.89$ ). Nurses considered the sensation-discomfort dimension least important. An independent t-test was then performed to establish significant differences between patient and nurse results. The t-test indicates a significant difference between nurse and patient importance ratings only in the skills training subscale ( $p = .027$ ). Nurses rated the skills training items higher in importance than did patients (Table 1).

Table 1

T-Test Results for the Five Dimensions of Preoperative Teaching

<u>Dimension</u>	<u>Subject Population</u>	<u>Mean</u>	<u>SD</u>	<u>t</u>	<u>Significance</u>
Psychosocial	Patient	4.19	.71	-1.8	.075
	Nurse	4.41	.53		
Role Information	Patient	4.26	.70	-.255	.799
	Nurse	4.29	.57		
Sensation/Discomfort	Patient	4.03	.75	.951	.344
	Nurse	3.89	.75		
Situational Information	Patient	4.28	.60	.566	.572
	Nurse	4.22	.55		
Skills Training	Patient	3.63	1.15	-2.256	.027*
	Nurse	4.09	.79		

Patient N = 45

Nurse N = 54

\*  $p < .050$



### **Demographic Findings**

The investigator originally enrolled 70 patient subjects and 94 nurse subjects. Forty-five patients completed and returned the questionnaire for a 64% return rate. Fifty-four nurses completed and returned the questionnaire for a 57% return rate. Fifty-eight percent of the patients were male while only 28% of the nurse population were male. The most frequent types of surgeries patients in this study experienced were almost equally divided between orthopedic, urological, and abdominal/general surgery (Table 3). Most of the patient subjects were educated beyond high school (80%). Sixty-one percent of the nurses had a Bachelor's degree and 26% had a Master's degree. Eleven of the 14 nurses who had a Master's degree obtained it in a field other than nursing. Sixty-five percent of the nurses had more than 10 years experience and 56% reported that 75 to 100% of the patients they cared for were surgical patients. Demographic characteristics of the subject population are outlined in Tables 2 through 4.

### **Reliability of the Instrument**

After piloting the revised pre-operative teaching questionnaire with the first 18 patients internal consistency reliability estimates for the revised tool ranged from  $\alpha = .87$  to  $\alpha = .94$  for each of the five dimensions of preoperative teaching and  $\alpha = .95$  for the entire tool.

Table 2

Demographic Characteristics of Patients and Nurses

<u>Variables</u>	<u>Patients</u>	<u>Nurses</u>
	<u>(N=45)</u>	<u>(N=54)</u>
<hr/>		
Age (years)		
Mean	48 ± 17.1	39.6 ± 7.5
Gender		
Male	58%	28%
Female	42%	72%
<hr/>		

Table 3

Patients' Education and Type of Surgery

<u>Variable</u>	<u>Frequency</u>
	(N = 45)
<u>Education</u>	
Grade 11 or less	3
High school Grad/GED	6
Some college/no degree	25
Bachelor Degree	6
Graduate Degree	5
<u>Type of Surgery</u>	
Abdominal/General	11
Anal	1
Urological	11
Orthopedic	12
Plastic	1
Eye, Ear, Nose, Throat	7
Vascular	1

Table 4

Nurse Demographic Data

<u>Variable</u>	<u>Frequency</u>
	<u>(N = 54)</u>
<hr/> Highest Level of Education	
Diploma in Nursing	2
Associate Degree in Nursing	5
Bachelor Degree in Nursing	31
Bachelor Degree in other field	2
Master's Degree in Nursing	3
Master's Degree in Other Field	11
Years Employed as RN	
1 to 3 years	2
4 to 6 years	11
7 to 9 years	6
10+ years	35
Percent of Surgical Patients Cared For	
None	4
Less than 25%	8
25 to 50%	7
51 to 75%	5
75 to 100%	30

## **Statistical Analysis of Data**

### **Description of preoperative teaching patients believe is important to receive before ambulatory surgery**

Patients ranked situational and role information as the most important dimensions of preoperative teaching ( $M = 4.28$  and  $4.26$  respectively) and skills training the least important ( $M = 3.63$ ) (Table 5). When each of the first 62 items on the preoperative teaching questionnaire was examined, the lowest mean rating for any particular item was 3.33. This corresponds to a rating of "moderately important". None of the items were considered "not important". Patients who added comments to the questionnaire were mainly concerned with situational information such as, being informed about delays, complications of surgery, and self care once they were home.

Chi Square analysis indicated a significant relationship ( $p < .05$ ) between the frequency of the patient receiving teaching about a certain item and the level of importance placed on that item. In all except 10 items over 80% of patients receiving the specific teaching rated the item important (4) or most important (5).

The Pearson product moment analysis was used to examine correlations between demographic data and the subjects' mean rating of importance for each of the five dimensions of preoperative teaching. There was a significant negative correlation ( $p = .015$ ) between the patients' education and the mean ratings for the skills training dimension.

Table 5

Patients' and Nurses' Ranking of the Importance of the Five Dimensions of Preoperative Teaching

<u>Dimension</u>	<u>Patients</u>	<u>Rank Order</u>	<u>Nurses</u>	<u>Rank Order</u>
	<u>Mean (SD)</u>		<u>Mean (SD)</u>	
Situational Information	4.28 (.60)	1	4.22 (.55)	3
Role Information	4.26 (.70)	2	4.29 (.57)	2
Psychosocial Support	4.19 (.71)	3	4.41 (.53)	1
Sensation-Discomfort	4.03 (.75)	4	3.89 (.75)	5
Skills Training	3.63 (1.15)	5	4.09 (.79)	4

**Description of preoperative teaching nurses believe is important to provide patients before ambulatory surgery**

Nurses rated the psychosocial support dimension most important ( $M = 4.41$ ) and sensation discomfort least important ( $M = 3.89$ ). The nurse mean rating for each of the first 62 questionnaire items was 3.34 or higher corresponding to “moderately important” or higher.

Nurses who added comments to their questionnaire were concerned with informing patients about the surgical process they would go through, safety information, pain control, and effects of medication. Nurse comments included information related to all five dimensions and all phases of surgery: preoperative, intraoperative and postoperative. The Pearson Product Moment analysis yielded no significant correlations for any of the nurse demographic characteristics and importance ratings.

**Similarities and differences between patients' and nurses' perceptions of what is important in preoperative teaching**

Chi-Square analysis was performed for the first 62 questions, which asked patients and nurses to rate the importance of receiving that particular type of teaching before having surgery. A significant difference between nurse and patient ratings of importance was observed in 14 of the 62 items. In 10 of the 14 items, a significantly higher percentage of patients than nurses rated the teaching at the most important level (5 = most important). The items that reflected a significant difference were examined more closely. When the frequency of ratings 4 and 5 were combined, 8 of the 14 items were rated higher by patients than nurses (Table 6).

Table 6

Significant Differences Between Nurse and Patient Ratings of Individual Survey Items

<u>Survey Item Number and Description</u>	<u>Significance<sup>a</sup></u>	<u>% of Patients</u>	<u>% of Nurses</u>
	<u>p value</u>	<u>rating 4 or 5</u>	<u>rating 4 or 5</u>
5. How long surgery would last	.005	85	79
6. Prevention of problems after surgery	.003	76	98
12. Provide information about where family and friends could wait	.002	80	92
13. Encouraged to discuss fears & concerns	.015	69	95
15. The need to identify people to receive information about patient's condition	.005	89	70
19. Practice coughing	.036	50	72
29. Nurses would frequently check any tubes to drain urine or stomach contents	.041	54	78
35. Medication after surgery to lessen discomfort would help patient rest and heal	.021	84	92
39. Tell patients they may feel sick to their stomach the first few hours after surgery	.049	86	65
41. Told patient they may have a headache upon awakening from surgery	.045	62	54
46. How long pain will last after surgery	.035	77	66
59. Patient will be expected to care for incisional area after surgery	.011	88	70
60. How long incision will take to heal	.008	80	59
61. How long hospital stay will be	.001	93	73

<sup>a</sup>Represents Chi Square analysis of importance levels 1 through 5.



The last part of the preoperative questionnaire asks the subjects to rank seven specific types of teaching and indicate the preferred time for patients to receive this information. After careful review of the completed questionnaires it was determined that this data was not usable because 47% of the patients and 46% of the nurses either did not fill this section out correctly, left it blank, or selected more than one preferred time for patients to receive the teaching.

Patients and nurses were also given the opportunity to add comments about additional information they thought should be part of the preoperative teaching protocol. Comments underwent content analysis by the investigator and one other expert perioperative nurse. These analyses were performed independently and the results compared. The comments were categorized according to the five dimensions of preoperative teaching and also as preoperative, intraoperative, or postoperative information (Table 7). The investigator and the expert perioperative nurse agreed on the categorizations for 91% of the comments.

Thirteen patients (29%) and 19 nurses (35%) commented on additional preoperative information needed by the ambulatory surgery patient. Seventy-three percent of patient and 76% of nurse comments were categorized as situational information. Patients were mainly concerned with being informed about delays, complications of surgery, and self care once they were home. Nurses were concerned with informing patients about the surgical process they would go through, safety information, pain control, and effects of medication. Nurse comments included information from all five dimensions of preoperative teaching while patients comments included only situational, sensation/discomfort, and skills training information.

Table 7

Frequency of Categories of Patient and Nurse Comments

<u>Category</u>	<u>Patient Frequency</u> (N=19)	<u>Nurse Frequency</u> (N=66)
Preoperative/Situational	9 (47%)	19 (29%)
Preoperative/Sensation-discomfort	2 (11%)	1 (2%)
Preoperative/Psychosocial		1 (2%)
Postoperative/Situational	5 (26%)	24 (36%)
Postoperative/Sensation-discomfort	2 (11%)	8 (12%)
Postoperative/Skills Training	1 (5%)	3 (5%)
Postoperative/Psychosocial		1 (2%)
Postoperative/Role Information		1 (2%)
Intraoperative/Situational		7 (11%)
Intraoperative/Sensation-discomfort		1 (2%)

## V. DISCUSSION AND SUMMARY

### Summary

Nursing and medical research literature consistently supports the benefits of preoperative teaching. Outcomes such as reduced postoperative recovery time and complications, and increased patient satisfaction and compliance with treatment regimes is well documented. Few studies prior to this have been done to examine the importance nurses and patients place on certain types of preoperative teaching.

Is there congruence between the preoperative teaching patients think is important and the preoperative teaching nurses believe is important? This descriptive, survey design study answers this question by examining the similarities and differences between ambulatory surgery patient and nurse perceptions of the importance of specific types of preoperative teaching categorized by five dimensions of preoperative teaching. Forty-five patients ranging in age from 19 to 74, and 54 nurses ranging in age from 25 to 54, participated in the study.

Results indicate no significant difference between nurse and patient perceptions of preoperative teaching except for the skills training dimension ( $p=.027$ ). The patient mean ratings for each of the five dimensions ranged from 3.63 to 4.28. Only the skills training dimension mean was below four indicating that patients believe most types of preoperative teaching to be "important" (rating of 4) or "most important" (rating of 5). The nurse mean ratings ranged from 3.89 to 4.41. All means except the sensation-discomfort dimension were four or higher indicating that nurses also believe that most types of preoperative teaching is "important" or "most important". Patients and nurses who participated in this study agree that the content of most types of preoperative teaching is important. These two groups disagree in the rank order of importance placed on each of the five dimensions of preoperative teaching (see Chapter IV,

Table 5). Although most adult patients think most types of information are important, they decide what information is most important based on how immediately useful that information is in solving their "real life" problem of having surgery. Nurses may approach the subject of preoperative teaching from a different perspective. The nurse's main concern may be to provide psychosocial support while the patient's chief concern is about what is going to happen next.

There were two other significant findings. Chi Square analysis indicated a significant relationship between the patient receiving teaching about a particular item and the importance rating for that item. A higher percentage of patients who received the teaching rated the item as "important" or "most important" than did those patients who did not receive the teaching. For example, 100% of the patients who received teaching about preventing problems after surgery by coughing and deep breathing, rated this item "important" (4) or "most important" (5). Only 52% of the patients who did not receive this teaching gave the item the two highest ratings. When a nurse takes the time to provide preoperative teaching the nurse is giving the patient feedback regarding what he or she thinks is important for the patient to know. Feedback increases motivation (Moss, 1994). Feedback and motivation facilitate learning and may influence the degree of importance a patient places on the preoperative teaching provided or not provided by a health care professional.

There was also a significant correlation ( $p=.027$ ) between the patient's level of education and their mean rating of the skills training subscale. Patients with higher levels of education tended to give items in the skills training dimension a lower importance rating. Well educated patients may not see the importance of nurses' explanations of skills such as coughing and deep breathing. After all, they have been coughing and breathing most of their lives. They may also easily grasp the concept and consider it less meaningful to their present learning needs.

## **Discussion**

Discussion of the described preoperative teaching important to patients and nurses is presented in this section. In addition to discussing the teaching important to each group, a discussion of the similarities and differences between patients' and nurses' perception of the importance of the topics described is presented at the same time.

### **Comparison of Preoperative Teaching Patients and Nurses Believe is Important**

This study on the importance of preoperative teaching replicated and expanded the methods and the subject population of Brumfield et al. (1996) and Yount & Schoessler (1991). The present results were similar to past results in a few areas. The situational information dimension was ranked by patients as the most important dimension in the present study and the previous study involving ambulatory surgery patients. The psychosocial support dimension was ranked most important in Yount and Schoessler's (1991) inpatient study. Sensation discomfort and skills training, respectively, were ranked fourth and fifth in order of importance in this and past investigations.

It is logical that ambulatory surgery patients perceive situational information as the most important. Ambulatory surgery patients are not admitted to the hospital a day or two before surgery where nurses and other health care professionals can guide them through the surgical process. They need to know ahead of time the course of events that will take place throughout their surgical experience. They clearly want to be kept informed about delay of their surgery. This is understandable because special arrangements must be made for family members to be available to accompany the patient to and from the hospital. Four of the 13 patients who wrote comments on their questionnaire indicated a strong desire to be kept informed of delays in the start of their surgery.

In this study and the two earlier studies, nurses ranked situational information third. Although there was no significant difference between the mean scores of nurses and patients for this dimension, it may indicate that nurses in the ambulatory setting need to be more aware of the importance of providing this type of information throughout the patient's surgical course.

Nurses in this thesis study, as those in Brumfield's et al. (1996), ranked all five dimensions in the same order. Psychosocial support was ranked by nurses as the number one dimension in all three studies. Skills training was consistently ranked higher by nurses in the current study and the two previous studies while patients ranked it last.

The caring nature of the nursing profession may be the reason for the consistent ranking of psychosocial support as number one. Although this dimension is important to patients as well, in the ambulatory setting more importance is placed on situational type information. The mean scores for psychosocial support, situational information, and role information are so similar it is difficult to make any more generalizations. Perhaps the most important point is to assess the preoperative education needs of each patient individually based on specific surgical situations and what the patient believes is important to know.

Patients continue to rank skills training lower than all other dimensions of preoperative teaching. The items in the skills training dimension specifically mention instruction on coughing and deep breathing. This particular type of information may not be meaningful or immediately useful to the patient. If questions on the survey were geared to a specific population, such as the orthopedic patient, and questions regarding training on crutch walking were asked, significantly different results may have been obtained because crutch walking is not something done throughout the patient's life. Nurses perceived skills training as an important part of the patient's preoperative education. Perhaps nurses are not explaining to the patient why this type of

education is important and how the simple acts of coughing and deep breathing may be more difficult when an abdominal incision is involved. Increased patient awareness of why skills are important and how they can help shorten the recovery time may influence the patient's perception of the importance of the skills training dimension of preoperative teaching and prevent complications.

This thesis study found a significant difference between nurses and patients for only the skills training dimension. Brumfield's et al. (1996) study did not detect any significant group differences in importance ratings for each of the five dimensions of preoperative teaching. Yount and Schoessler's (1991) study found significant differences for the psychosocial, sensation-discomfort and skills training subscale. Fifty-six percent of the nurses in this thesis study indicated that they cared for surgical patients 75 to 100% of the time. Fifty-seven percent of the nurses surveyed in Yount and Schoessler's (1991) study reported working with surgical patients less than 50% of the time. Significant differences found in their study could have resulted from a large number of nurses who did not work with enough surgical patients to understand their particular needs.

Although this study recruited only nurses from units that cared for ambulatory surgery patients, four nurses stated that they did not care for any surgical patients and eight nurses stated that they cared for surgical patients less than 25% of the time. The four nurses who stated they did not care for any surgical patients were nurse managers. It is possible that they do not have any patient contact and perform only administrative duties. Of the eight nurses that cared for surgical patients less than 25% of the time, five were staff nurses, four of which work in the operating room. It is very hard to believe that staff nurses in the operating room or on a surgical floor take care of so few surgical patients. It is possible they did not understand the question.

Two nurses did not answer the question because they did not understand it and one nurse answered it but did not understand the question. If the demographic tool is used again this question may need to be reworded or careful explanation of the meaning of the question or terms such as surgical patient, may be necessary. It is doubtful that this discrepancy affected the findings in this study. The Pearson Product Moment analysis indicated no significant correlation between the percent of surgical patients cared for and the importance ratings of each of the five dimensions of preoperative teaching.

#### **Rank and timing of specific preoperative teaching**

One section of the preoperative teaching questionnaire asked patients and nurses to rank order and indicate the preferred timing of seven types of preoperative teaching. Although there were significant differences between nurse and patient scores in some areas, it is difficult to come to a specific conclusion about this information because 47% of the patients and 46% of the nurses did not complete this section correctly. It is possible that ranking this information and choosing the ideal time to receive the information was too difficult, the directions were not clear or the subjects elected to ignore a forced choice. The directions indicated choosing only one time to receive teaching yet 14 nurses and 4 patients indicated more than one time to receive this teaching. This illustrates an important point in adult learning. Preoperative teaching is not a one time event. It should be continuous throughout the patient's surgical experience. Teaching done before admission and then repeated after admission and at the time of the event can only help the patient remember and understand what is happening and how he or she can help themselves recover. If the directions offered the option to choose more than one particular time to receive preoperative teaching, very different results may have been obtained.



A similar phenomenon was observed when patients and nurses tried to rank order the information. Although the directions said to chose each number only once, many individuals chose to rank all of the information with the highest numbers (6 and 7). This may indicate they believed that all of the information listed was very important. Also, the fact that many subjects did not rank order the information indicates that it may be very difficult to rank order this information.

For the reasons stated above, the investigator believes that this portion of the questionnaire should be eliminated. If the preferred timing of preoperative teaching is an important variable to examine the option of choosing more than one time should be given. It would be interesting to see how many patients would like the content of preoperative teaching repeated throughout their surgical experience.

#### **Patient and nurse comments**

The investigator attempted to call each of the patient subjects two or three days postoperatively to obtain feedback about the questionnaire and answer any of the patients' questions. Twenty-eight of the 54 patients were spoken to at this time. This personal contact may have contributed to the survey's high response rate (64%). Five of the 28 patients verbally indicated that since the questionnaire asked if they received the teaching from nurses it affected their response. Two patients also wrote comments on their questionnaire that since they did not receive the teaching from nurses but received the information from other sources, they indicated a "no" in the received teaching column. Therefore, each patient's answer does not necessarily mean that they did not receive teaching about the item only that they did not receive the teaching from nurses. Even though only seven patients indicated that the word "nurse" affected their response, it is still possible that the remainder responded to this question without regard for who

was doing the teaching. This could mean that the responders received the teaching but not necessarily from nurses. Nurses are part of the multidisciplinary team and are not the only group that provides patient education. Physicians, Licensed Practical Nurses (LPN), and medical technicians are also involved in providing preoperative patient education. In this age of the unskilled patient care provider, patients cannot always tell if their care giver is a registered nurse. Therefore, they may not be able to distinguish whether or not they received information from a nurse. If the nursing community's main concern is whether or not the patient is receiving the teaching they need and want, the investigator recommends excluding the word "nurse" from the received teaching column of the questionnaire if it is used again. This will provide more accurate information about the teaching patients receive. It also considers the multidisciplinary approach to patient care used today.

Patient and nurse subjects were given the opportunity to comment on additional preoperative teaching they thought would be important. Comments regarding situational information was the most frequent for both groups. Patients were very concerned about being informed about delays in their surgery start time. They felt nurses did not communicate with them enough about what was happening. They were also concerned about receiving teaching about postoperative effects of the surgery and complications that may occur. Pain control was also a concern for some patients. One patient wanted to know how to tell the doctor that she knew the type of pain medication that worked for her and that what he or she was prescribing would not help her. The comments these patients shared indicate the type of information that is immediately useful and meaningful to the patient in solving the real life problems associated with having surgery. This is the basis of the andragogical model of adult learning. Health care professionals should listen to their patients. Most of the time the patient knows what will help

them feel better, especially those patients with chronic pain. Communication is one of the keys to easing a patient's anxiety.

Nurses commented more often on situational information. Most of their comments dealt with describing the surgical environment and procedures that the patient would experience. Caring for the surgical incision and explaining signs and symptoms of postoperative complications were also important to nurses. Several nurses commented on pain control and explanations regarding the use and side effects of medications. None of the nurse comments included providing information about delays in the start of the patient's surgery. Given the long list of nurse comments it is possible that nurses are providing preoperative teaching that they think is important and not necessarily what patients value the most. Since both patients and nurses agreed on the importance of pain control and postoperative care perhaps more specific questions concerning these areas should be added to the preoperative teaching questionnaire.

#### **Significance of receiving teaching and level of importance**

As mentioned earlier, a significant relationship in the frequency of receiving teaching and the level of importance placed on the items exists. The two previous studies reported similar results. The percentage of patients who received a particular type of preoperative teaching tended to rank the item higher than those who did not receive the teaching. It is possible that patients believe that if a nurse or doctor take the time to explain something it must be important. Perhaps the more important the person providing the information is perceived, the more important the patient believes the information is to learn. Likewise, they may believe that if a subject is not mentioned it probably is not that important.

This particular patient population received a lot of preoperative teaching. The mode for all except 25 questions was "yes" meaning that the patient received teaching. This may account

for the importance rating means of 4 or higher in most of the dimensions of preoperative teaching.

### **Limitations**

The sample size of 45 patients and 54 nurses was small and part of the military health care system and affects the generalizability of the results. The educational level of both patients and nurses was high and may not be indicative of the educational level of the general public and the perioperative nursing community.

Patients were given the questionnaire to complete within five days of their surgery. Patient recall may have been affected by the passing of time and they may have received help from others in completing the questionnaire.

The consistent reference to nurses providing the teaching may have influenced patient responses. Patients may have received the teaching from other than nurses so indicated a "no" in the received teaching column. Patients may also believe the information to be important but receiving it from a nurse not important. It is important to differentiate between what type of teaching in general is important to patients and the type of teaching that is important for patients to receive from nurses. The preoperative teaching questionnaire should be modified further in future studies to eliminate the reference to nurses if research interest is to find out what is important to the surgical patient.

### **Implications for Nursing**

Nurses play an important role in the education of surgical patients. Providing the patient with information and teaching that specifically meets their needs will help them go through the surgical process more smoothly and facilitate recovery. Nurses must understand that patients are interested in preoperative teaching that is meaningful to them, not just meaningful to the

healthcare provider. If a nurse believes a subject to be crucial for the patient's recovery, he or she should explain to the patient why it is important as well as provide the teaching. If the material is presented in such a way as to show the patient how meaningful it is to them, they will be more receptive and ready to learn. The implication is to increase the patient's perception of importance for those items healthcare professionals believe are essential to the patient's recovery.

Assessment of individual patients for specific needs and providing preoperative education that is applicable to the patient's surgery and their particular situation are extremely important nursing implications. Since ambulatory surgery patients do not spend time in the hospital preoperatively or postoperatively their needs are different than the inpatient's needs. This is illustrated by the differences in importance ratings given by inpatients and ambulatory surgery patients in previous studies (Brumfield et al., 1996; Yount & Schoessler, 1991). Nurses must realize the different needs of inpatients and outpatients when designing a preoperative education program.

Another finding in this thesis study, and important implication for nursing, was that teaching should be reinforced. This may be particularly true for ambulatory surgery patients since they do not have as much interaction with health care professionals as inpatients. Providing repeated preoperative teaching in the ambulatory surgery environment may require meticulous coordination and collaboration with the various departments the patients visit throughout their surgical course.

Although studies such as this may illuminate trends regarding the global types of information important to patients, they do not eliminate the need to personally assess each patient to establish what is most important to the individual. Assessment of individual patient education needs is still the key to providing quality patient care.

### **Recommendations for Future Research**

This thesis study investigated patients' opinions of the importance of preoperative teaching. They had experienced the ambulatory surgical process and responded within five postoperative days by completing the questionnaire. Thus, the patient's choices were made in retrospect. Would the importance ratings be different if they were given the questionnaire to complete before they had surgery? Preoperative teaching implies educating the patient before surgery takes place. What is important to patients before they have surgery may be different than what is important now that they have gone through the process. Moving on to a study comparing preoperative and postoperative patient information needs may illuminate differences so that nurses can explain why the information will be important to the patient once they have had surgery. This could be done by measuring the same patients' importance ratings before surgery and then again after surgery or using two different groups, a preoperative group and a postoperative group.

The qualitative data illuminated many differences between nurses' and patients' perceptions of what is important to know during the surgical experience. Nurses may not be aware of the many variables patients are struggling with as they prepare for surgery. Additional research questions could be posed to examine why these differences exist.

More research is needed to examine innovative, cost effective ways of delivering preoperative education to ambulatory patients. Research that evaluates how effective these innovative ways of delivering patient education is also necessary.

Repeating this study with a larger and more heterogeneous population may further validate the Pre-operative Teaching Questionnaire. Using multiple sites for the study would also be useful. The tool should also be modified to identify from whom the patient received

information, including all types of health care providers, not just nurses. The word nurse should then be eliminated from the statements reflecting the "importance" component.

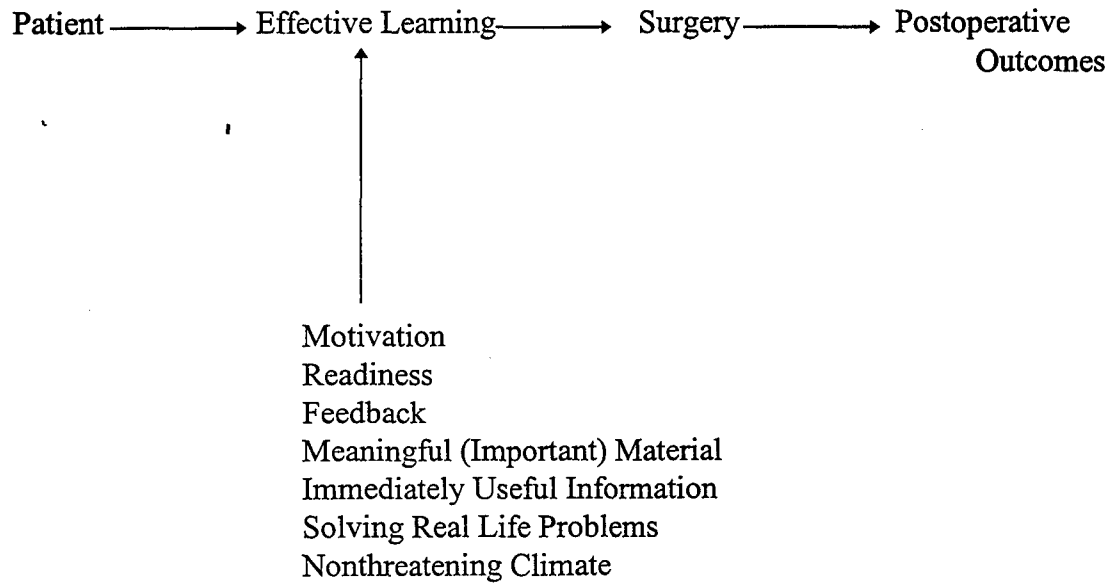
There was a statistically significant difference in nurse and patient ratings of importance for the skills training dimension of preoperative teaching. Since this finding occurred in both this present study and the past inpatient study, future investigations should determine the reason why patients do not place a very high importance on this dimension. If nurses continue to place high value on the skills training dimension, ways of increasing patients' awareness of its importance should be sought. An intervention study using two or more groups of subjects who are presented skills training information in a different way may help enlighten preoperative patient educators about ways to increase the patient's awareness of the importance of this type of teaching.

It is well known that effective preoperative teaching leads to positive postoperative outcomes. However, nurses must continue to explore methods to improve the teaching they provide and increase patient awareness of information that is meaningful to their recovery. This includes identifying and including information the patient thinks is important to his or her recovery.

**APPENDIX A**  
**THEORETICAL FRAMEWORK**



### Theoretical Framework



**APPENDIX B**  
**AUTHORIZATIONS**



Wilford Hall Medical Center  
Institutional Review Board (IRB)  
NOTICE OF ACTION REGARDING IRB REVIEW

21 Jan 98

MEMORANDUM FOR MAJ CHERLY A. REILLY

FROM: 59MDW/HSRP (Protocol Support Services) (2-7143)

SUBJECT: EXEMPT PROTOCOL HSRP# 98EX034 "OUTPATIENT PREOPERATIVE EDUCATION  
NEEDS IDENTIFIED BY NURSES AND PATIENTS"

1. Your AFI 40-403 EXEMPT PROPOSAL received expedited review on behalf of the WHMC Institutional Review Board by the Director, Research Division on 17 Jan 98. It was approved as written. Your study is approved and may begin once you come by the Protocol Support Services office to sign the signature page and enter the date of study initiation (must be after date of final approval). This second signature indicates activation of the protocol.

2. Please forward a copy of the final report to HSRP (Protocol Support Services) when the study is completed. Investigators will need to periodically report their protocol's progress (see Additional Information Section, in the Clinical Investigation Investigator's Guide). We recommend keeping progress notes on all protocols. Laboratory notebooks are available through the Research Division's Laboratory Supply Section, ext 2-7159, or the 59th MDW Non-Medical Supply (ordered through your supply personnel). NOTE: Bound notebooks may be required for protocols being considered for subjects.

Please note items marked with an "x" below that apply to your study:

☐ FY97 Research Division funding in the amount of      was approved. Please contact SSgt Fagin, at ext 2-7141 to make an appointment to discuss the procurement of requested supplies, equipment, service contracts or animals. At no time are you authorized to procure any of these items through channels other than the Research Division. YOU ARE NOT AUTHORIZED TO USE YOUR SECTION'S O&M FUNDS TO SUPPORT YOUR PROTOCOL.

☐ Please contact Ms Barbara Gaiser, External Resources Coordinator, ext 2-5203, regarding documentation and receipt of external resources.

PATTY ALLEN  
Protocol Coordinator  
Protocol Support Services

Info copy to:

- ☐ SSgt Fagin w/proposal
- ☐ Ms Gaiser w/Proposal



The University of Texas  
Health Science Center at San Antonio  
7703 Floyd Curl Drive  
San Antonio, Texas 78284-7830

Institutional Review Board  
(Multiple Assurance #1403)

(210) 567-2351  
FAX: (210) 567-2360

January 27, 1998

Cheryl A. Reilly, R.N., B.S.N., C.N.O.R.  
1606 Kingsbridge  
San Antonio, TX 78253

Dear Ms. Reilly:

Re: IRB Protocol # **E-978-058** Outpatient Preoperative Education Needs  
Identified by Nurses and Patients (WHMC)

Reference your response to our request, dated January 26, 1998.

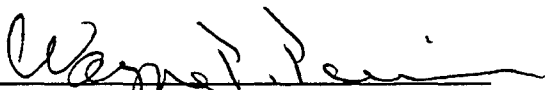
This protocol has been determined EXEMPT under DHHS Regulation 46.101(b)(2): Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

**RESPONSIBILITIES OF PRINCIPAL INVESTIGATOR:**

- (1) submit for review and approval by the IRB all modifications to the protocol or consent form(s) prior to the implementation of the change;
- (2) for funded projects, submit a copy of renewals/continuations and advise whether the study of specimens, records, or human subjects has changed from the original submission; and
- (3) submit a Status Report for continuing review by the IRB. A form will be sent to you annually to verify the status of the activity.

Source of Funding: none

NEXT IRB REVIEW: JANUARY 1999

  
Wayne R. Pierson, Ph.D., Director, IRB



The University of Texas  
Health Science Center at San Antonio  
7703 Floyd Curl Drive  
San Antonio, Texas 78284-7830

Institutional Review Board  
(Multiple Assurance #1403)

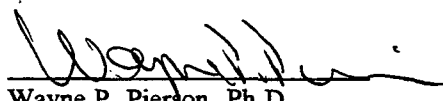
(210) 567-2351  
FAX: (210) 567-2360

**CERTIFICATION OF APPROVAL**

**INSTITUTIONAL REVIEW BOARD**

PROTOCOL TITLE:	Outpatient Preoperative Education Needs Identified by Nurses and Patients
PRINCIPAL INVESTIGATOR:	Cheryl A. Reilly, RN, BSN, CNOR
PROTOCOL NUMBER:	E-978-058
APPROVAL DATE:	January 27, 1998
SPONSOR:	None

The Institutional Review Board at The University of Texas Health Science Center at San Antonio has received approval by DHHS, Office for Protection from Research Risks, to operate under Multiple Project Assurance #M-1403, in accord with DHHS human subjects regulations, 45 CFR 46, Subpart A, published June 18, 1991 and revised October 02, 1996, and Subparts B-D, revised March 8, 1983. In addition, we comply with FDA human subjects regulations, 21 CFR revised October 02, 1996.

  
Wayne P. Pierson, Ph.D.  
Director  
Institutional Review Board

January 28, 1998  
Date

**APPENDIX C**  
**INFORMATION SHEET**

**Information Sheet About a Study of the  
Outpatient Preoperative Education Needs Identified by Nurses and Patients  
University of Texas Health Science Center at San Antonio  
Conducted at Wilford Hall Medical Center**

**Purpose, Duration, and Procedure**

We are asking you to take part in a research study about patient teaching that is done before surgery (preoperative teaching). We want to learn what kind of patient teaching nurses and patients believe is important to have before going to surgery. Patient and nurse answers to questions about teaching done before surgery will be compared for similarities and differences.

We are asking you to take part in this study because you are scheduled for surgery on an outpatient basis or you are a nurse who provides education to people having surgery. If you decide to take part, we will give you a questionnaire to fill out. The questionnaire has 81 questions. The purpose of the questionnaire is to find out what kind of preoperative teaching you think is important. The questionnaire should take no longer than two hours to complete. The research nurse will call patients two days after surgery to answer any questions and help complete the questionnaire if necessary. Please complete the questionnaire within five (5) days of receiving it. A stamped, addressed envelope will be provided for patients to return their questionnaire. Nurses will return their questionnaires to an area designated on their unit. Participation in this study will not require any additional visits to the hospital.

**Risks or Discomforts**

There are no risks or discomforts associated with this study.

**Benefits**

The potential benefit of participating in this study is to provide information that will improve preoperative teaching by providing meaningful information to patients. We do not guarantee that you will benefit from taking part in this study.

**Cost to Participants**

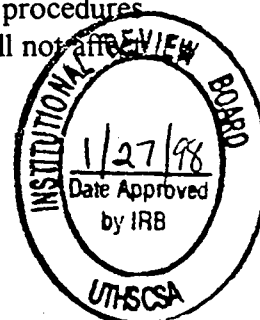
There is no cost for participation in this study.

**Confidentiality Statement**

The answers to questionnaire items will not be connected to your name in any way. Everything we learn about you will be confidential. If we publish the results of the study in a scientific journal or book, we will not identify you in any way.

**Voluntary Participation**

Your decision to take part in this study is completely voluntary. You are free to choose not to take part in the study or to stop taking part at any time. Lisa DeDecker and Cheryl Reilly will answer any and all questions you have about this study, your participation, and the procedures involved. If you are a patient and choose not to take part or to stop at any time, it will not affect



**Information Sheet**  
**Outpatient Preoperative Education Needs Identified by Nurses and Patients**

your future medical care at Wilford Hall Medical Center. If you are a nurse and choose not to participate, it will not affect your status as an employee of Wilford Hall Medical Center.

Cheryl A. Reilly, the principal investigator, can be reached at (210)679-8196 or (210)573-3200. If you have any questions now, feel free to ask. If you have additional questions later, Cheryl Reilly can be reached at the phone numbers provided above.

The University of Texas Health Science Center committee that reviews research on human subjects will answer any questions about your rights as a research subject. The phone number is 567-2351.

This form is yours to keep.





**APPENDIX D**

**PRE-OPERATIVE TEACHING QUESTIONNAIRE**  
**(NURSE PERSPECTIVE)**

## PRE-OPERATIVE TEACHING QUESTIONNAIRE (Nurse Perception)

Nurses help people get ready for the experience of surgery in a number of ways. Pre-operative teaching is one important way nurses prepare people for surgery.

We are interested in learning more about the kinds of teaching that nurses believe best help people get ready for surgery. The information you provide will be most helpful in this process. You can assist by telling us what pre-operative teaching you feel is important to provide patients before surgery.

Each statement describes a kind of teaching nurses can do to prepare people for surgery. Please read each statement below and chose one (1) answer for each statement. In the column on the right, choose a number to tell us how important you believe the kind of teaching described in each statement is for you to give patients **before** they go to surgery. Five (5) indicates Very Important, and one (1) indicates Not At All Important to you. There are no right or wrong answers. Your opinion is what is important.

Completion of this questionnaire indicates your consent to participate in this study.

**5 - Very Important   4 - Important   3 - Moderately Important   2 - Somewhat Important  
1 - Not Important**

**Before surgery, NURSES EXPLAIN TO PATIENTS:**

**Importance of giving  
this kind of teaching to  
pre-operative patients**

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. What events or procedures they will experience between admission and surgery.   | 5 | 4 | 3 | 2 | 1 |
| 2. There will be restrictions on their eating and drinking before surgery.   | 5 | 4 | 3 | 2 | 1 |
| 3. They will be asked to sign a consent saying they understand what will be done in surgery.   | 5 | 4 | 3 | 2 | 1 |
| 4. What they are to do to get ready for surgery such as take a shower, remove jewelry.   | 5 | 4 | 3 | 2 | 1 |
| 5. How long their surgery will last.   | 5 | 4 | 3 | 2 | 1 |
| 6. They will be expected to help prevent problems after surgery by coughing, deep breathing, and doing leg and foot exercises when in bed. | 5 | 4 | 3 | 2 | 1 |

**5 - Very Important   4 - Important   3 - Moderately Important   2 - Somewhat Important  
1 - Not Important**

**5 - Very Important   4 - Important   3 - Moderately Important   2 - Somewhat Important  
1 - Not Important**

<b>Before surgery, NURSES EXPLAIN TO PATIENTS:</b>	<b>Importance of giving this kind of teaching to pre-operative patients</b>				
	5	4	3	2	1
7. How to support their incision when moving in bed or coughing & deep breathing after surgery.	5	4	3	2	1

**Before surgery, NURSES:**

8. Listened to patient concerns & worries about surgery.	5	4	3	2	1
9. Help patients become aware that it was normal to have fears and anxieties about surgery.	5	4	3	2	1
10. Tell patients that soon after receiving their medication to relax them for surgery, they are expected to stay in bed with the side rails up.	5	4	3	2	1
11. Tell patients that soon after receiving their injection before surgery, their mouth will become dry and they will become drowsy.	5	4	3	2	1
12. Provide information about where patient's family & friends could wait while they are in surgery.	5	4	3	2	1
13. Encourage patients to discuss any fears or concerns they have about surgery.	5	4	3	2	1
14. Readily answer questions patients have about surgery and being in the hospital.	5	4	3	2	1
15. Ask patients to identify the people they want to receive information about their condition during surgery.	5	4	3	2	1
16. Review with patients the kind of surgery they are going to have.	5	4	3	2	1
17. Describe how to take deep breaths after surgery.	5	4	3	2	1

**5 - Very Important   4 - Important   3 - Moderately Important   2 - Somewhat Important  
1 - Not Important**

**5 - Very Important   4 - Important   3 - Moderately Important   2 - Somewhat Important  
1 - Not Important**

		<b>Importance of giving this kind of teaching to pre-operative patients</b>				
<b><u>Before</u> surgery, NURSES HAVE PATIENTS:</b>						
18.	Practice deep breathing.	5	4	3	2	1
19.	Practice coughing.	5	4	3	2	1
20.	Practice techniques of supporting their incision area when moving in bed or coughing.	5	4	3	2	1

**Before surgery, NURSES:**

21.	Provided information that help patients reduce their concerns about surgery.	5	4	3	2	1
22.	Tell patients that they might briefly feel cold and hear loud noises when they first enter the surgery room.	5	4	3	2	1
23.	Tell patients what room they will go to after surgery.	5	4	3	2	1
24.	Encourage patients to request assistance whenever they need it.	5	4	3	2	1

**Before surgery, NURSES EXPLAIN TO PATIENTS:**

25.	Why nurses are doing pre-surgery procedures such as, giving them an injection & asking them to empty their bladder.	5	4	3	2	1
26.	An anesthesiologist will visit them before surgery to discuss what anesthesia would be used.	5	4	3	2	1
27.	Their incision may pull, burn, or itch while it is healing.	5	4	3	2	1
28.	The hospital has chaplains available to visit patients and their families if this is desired.	5	4	3	2	1

**5 - Very Important   4 - Important   3 - Moderately Important   2 - Somewhat Important  
1 - Not Important**

**5 - Very Important   4 - Important   3 - Moderately Important   2 - Somewhat Important  
1 - Not Important**

		<b>Importance of giving this kind of teaching to pre-operative patients</b>				
<b><u>Before</u> surgery, NURSES:</b>						
29.	Nurses will frequently check any tubes used to drain urine or stomach contents after surgery.	5	4	3	2	1
30.	Help patients understand they may have feelings of uneasiness and change as part of their hospital experience.	5	4	3	2	1
31.	Provide reassurance to patients by being available before their surgery.	5	4	3	2	1
32.	Tell patients that immediately after surgery they may be able to hear things before they can open their eyes or move around.	5	4	3	2	1
33.	Provide patients with information on how to avoid possible problems like pneumonia.	5	4	3	2	1
34.	Reassure patients that their family can see them soon after surgery.	5	4	3	2	1

**Before surgery, NURSES EXPLAIN TO PATIENTS:**

35.	Receiving medication after surgery to lessen surgical discomfort will help them rest & heal.	5	4	3	2	1
36.	They may have tubes to provide fluids (I.V.), drain urine (catheter), or drain stomach contents (N.G.) after surgery.	5	4	3	2	1
37.	They may need a plastic tube or mask to help them breathe after surgery.	5	4	3	2	1
38.	Nurses will monitor their fluid intake and urine output after surgery.	5	4	3	2	1

**5 - Very Important   4 - Important   3 - Moderately Important   2 - Somewhat Important  
1 - Not Important**

**5 - Very Important 4 - Important 3 - Moderately Important 2 - Somewhat Important  
1 - Not Important**

<b>Before surgery, NURSES:</b>		<b>Importance of giving this kind of teaching to pre-operative patients</b>				
39.	Tell patients they may feel sick to their stomach the first few hours after surgery.	5	4	3	2	1
40.	Tell patients they may have a backache or aches in their arms and legs for a while after surgery.	5	4	3	2	1
41.	Tell patients they may have a headache upon awakening from surgery.	5	4	3	2	1
42.	Tell patients they may have a cramping feeling in muscles after surgery.	5	4	3	2	1
43.	Tell patients they may feel lightheaded the first time they stand up after surgery.	5	4	3	2	1
44.	Tell patients they may notice more pain when they first get up and moved around.	5	4	3	2	1
45.	Provide reassurance by expressing concern that patients needs are met prior to their surgery.	5	4	3	2	1
46.	Provide patients with information about how long pain or discomfort will last after surgery.	5	4	3	2	1
47.	Encourage patients to make decisions regarding their care in the hospital.	5	4	3	2	1
48.	Help patients identify what care they may need after being discharged from the hospital.	5	4	3	2	1

**Before surgery, NURSES EXPLAIN TO PATIENTS:**

49.	They will be expected to get out of bed and walk a short distance the day they come back from surgery.	5	4	3	2	1
50.	Why they need to walk soon after surgery.	5	4	3	2	1

**5 - Very Important 4 - Important 3 - Moderately Important 2 - Somewhat Important  
1 - Not Important**

**5 - Very Important   4 - Important   3 - Moderately Important   2 - Somewhat Important  
1 - Not Important**

		<b>Importance of giving this kind of teaching to pre-operative patients</b>				
<b>Before surgery, NURSES EXPLAIN TO PATIENTS:</b>						
51.	They may feel tired for several weeks after surgery as they resume their normal activities.	5	4	3	2	1
52.	They may feel down or depressed for a while after surgery.	5	4	3	2	1
53.	They will be expected to tell nurses if they notice changes in how they were feeling after surgery.	5	4	3	2	1
54.	They can be given pain medication before having to do activities like walking or coughing.	5	4	3	2	1
55.	That telling a nurse about their discomfort after surgery would help nurses determine which of the pain medications ordered by their doctor would best relieve their discomfort.	5	4	3	2	1
56.	Nurses will frequently check their surgical dressings after surgery.	5	4	3	2	1
57.	Receiving medication after surgery to lessen surgical discomfort will help them to do activities that will prevent problems.	5	4	3	2	1
58.	Ways to decrease their discomfort after surgery in addition to using pain medication.	5	4	3	2	1
59.	They will be expected to care for their incisional area after discharge.	5	4	3	2	1
60.	How long it would take for their incision to heal.	5	4	3	2	1
61.	How long they may be in the hospital after surgery.	5	4	3	2	1
62.	They will be expected to identify what information they will need about resuming activities after discharge.	5	4	3	2	1

**5 - Very Important   4 - Important   3 - Moderately Important   2 - Somewhat Important  
1 - Not Important**

63. In addition to the teaching described in the previous statements, what additional pre-operative teaching do you believe patients need to have. Please list.



There are a number of types of preoperative teaching provided by nurses. We are interested in how important you believe each type of pre-operative teaching is and when it may best be provided to help people cope with the experience of surgery.

Below is a list describing types of pre-operative teaching and a choice of times when a nurse could do the teaching. Please do the following: (1) **Rank** the types of pre-operative teaching listed (#64 through 70) in order of importance to you from 7 (most) to 1 (least important), using each number only once; and (2) for each type of teaching **check** when the nurses should do this teaching to be most helpful for patients having surgery.

**Types of Pre-Operative Teaching Provided by Nurses** (put a number on the line for each type, ranking it from 7 (most important) to 1 (least important). Use each number only once.

**Time Teaching Should be Done** (For each definition, check the box below indicating the time you believe that type of pre-operative teaching should be given).

Teaching about:	Before admit to hospital	After admit to hospital but before surgery	At the time event or procedure occurred
___ 64. Care nurses give before surgery.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___ 65. The what, where, and why of events experienced and equipment used .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___ 66. When events and procedures would occur and in what order they would occur .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___ 67. What events and procedures would feel like to patients.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___ 68. What the patient will be expected to do before and after surgery to speed recovery .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___ 69. Expressing concerns or worries about surgery and finding ways to cope with the surgery experience.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___ 70. New skills such as coughing and deep breathing to help prevent complications after surgery.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NURSE INFORMATION

Please complete the following:

A. Age: \_\_\_\_\_

B. Sex:  
\_\_\_\_ Female  
\_\_\_\_ Male

C. Type of educational program completed to qualify for R.N. licensure:  
\_\_\_\_ Diploma in Nursing  
\_\_\_\_ Associate Degree in Nursing  
\_\_\_\_ Bachelor's Degree in Nursing

D. Highest level of education attained:  
\_\_\_\_ Diploma in Nursing  
\_\_\_\_ Associate Degree in Nursing  
\_\_\_\_ Bachelor's Degree in Nursing  
\_\_\_\_ Bachelor's Degree in other field  
\_\_\_\_ Master's degree in Nursing  
\_\_\_\_ Master's degree in other field  
\_\_\_\_ Doctoral Degree (please indicate area \_\_\_\_\_)

E. Length of time employed as an R.N.:  
\_\_\_\_ Less than 1 year  
\_\_\_\_ 1 to 3 years  
\_\_\_\_ 4 to 6 years  
\_\_\_\_ 7 to 9 years  
\_\_\_\_ 10+ years (please indicate number of years \_\_\_\_\_)

F. Length of time employed as an R.N. at Wilford Hall Medical Center  
\_\_\_\_ Less than 1 year  
\_\_\_\_ 1 to 3 years  
\_\_\_\_ 4 to 6 years  
\_\_\_\_ 7 to 9 years  
\_\_\_\_ 10+ years (please indicate number of years \_\_\_\_\_)

G. Are you currently working:  
\_\_\_\_ Full time  
\_\_\_\_ Part time  
\_\_\_\_ On Call

H. Your job capacity is:

- ☐ Float nurse
- ☐ Staff nurse
- ☐ Assistant Nurse Manager
- ☐ Nurse Manager
- ☐ Graduate Nurse

I. Kind of unit on which you work:

- ☐ Surgery
- ☐ Urology
- ☐ Gynecology/pediatrics
- ☐ Neurology
- ☐ Orthopedics
- ☐ Respiratory
- ☐ Cardiology
- ☐ Medicine
- ☐ Oncology
- ☐ ICU/CCU
- ☐ Rehabilitaion
- ☐ Operating Room
- ☐ Clinic (please specify which clinic \_\_\_\_\_)
- ☐ Other \_\_\_\_\_

J. Please estimate, in terms of percent, the number of surgical patients you generally care for on a daily basis:

- ☐ None
- ☐ Less than 25%
- ☐ 25 to 50%
- ☐ 51 to 75%
- ☐ 75 to 100%

**Thank you for your help. Knowing what pre-operative teaching nurses and patients believe to be important will help nurses provide teaching to more closely fit patients' needs and wants.**

**APPENDIX E**  
**PRE-OPERATIVE TEACHING QUESTIONNAIRE**  
**(PATIENT PERSPECTIVE)**

## PRE-OPERATIVE TEACHING QUESTIONNAIRE (Patient Perception)

Nurses help people get ready for the experience of surgery in a number of ways. Pre-operative teaching is one important way nurses prepare people for surgery.

We are interested in learning more about the kinds of teaching that will best help people get ready for surgery. The information you provide will be most helpful in this process. You can assist by telling us what pre-operative teaching you actually received and what teaching you now feel was important to have had before surgery.

Please read each statement below and chose two (2) answers for each statement. In the first column choose a "yes" or "no" to tell us whether or not you received the teaching described before going to surgery. In the second column choose a number to tell us how important it was for you to have had the kind of teaching described in each statement before your surgery. Five (5) indicates Very Important, and one (1) indicates Not At All Important to you. There are no right or wrong answers. Your opinion is what is important. Completion of this questionnaire indicates your consent to participate in this study.

**5 - Very Important   4 - Important   3 - Moderately Important   2 - Somewhat Important  
1 - Not Important**

<b><u>Before</u> surgery, NURSES EXPLAINED:</b>	<b>Received this teaching (circle yes or no)</b>		<b>Importance of receiving this teaching</b>				
	Yes	No	5	4	3	2	1
1. What events or procedures I would experience between admission and surgery.	Yes	No	5	4	3	2	1
2. There would be restrictions on my eating and drinking before surgery.	Yes	No	5	4	3	2	1
3. I would be asked to sign a consent saying I understood what was to be done in surgery.	Yes	No	5	4	3	2	1
4. What I needed to do to get ready for surgery such as take a shower, remove jewelry.	Yes	No	5	4	3	2	1
5. How long my surgery would last.	Yes	No	5	4	3	2	1
6. I would be expected to help prevent problems after surgery by coughing, deep breathing, and doing leg and foot exercises when in bed.	Yes	No	5	4	3	2	1

**5 - Very Important   4 - Important   3 - Moderately Important   2 - Somewhat Important  
1 - Not Important**

**5 - Very Important 4 - Important 3 - Moderately Important 2 - Somewhat Important  
1 - Not Important**

<b><u>Before</u> surgery, NURSES EXPLAINED:</b>	<b>Received this teaching (circle yes or no)</b>	<b>Importance of receiving this teaching</b>
7. How to support my incision when moving in bed or coughing & deep breathing after surgery.	Yes No	5 4 3 2 1

**Before surgery, NURSES:**

8. Listened to my concerns & worries about surgery.	Yes No	5 4 3 2 1
9. Helped me become aware that it was normal to have fears and anxieties about surgery.	Yes No	5 4 3 2 1
10. Told me that after receiving medication to relax me for surgery, I would be expected to stay in bed with the side rails up.	Yes No	5 4 3 2 1
11. Told me that soon after receiving my injection before surgery, my mouth would become dry and I would become drowsy.	Yes No	5 4 3 2 1
12. Provided information about where my family & friends could wait while I was in surgery.	Yes No	5 4 3 2 1
13. Encouraged me to discuss any fears or concerns I had about surgery.	Yes No	5 4 3 2 1
14. Readily answered questions I had about surgery and being in the hospital.	Yes No	5 4 3 2 1
15. Told me I needed to identify the people I wanted to receive information about my condition during surgery.	Yes No	5 4 3 2 1
16. Reviewed with me the kind of surgery I was going to have.	Yes No	5 4 3 2 1
17. Described how to take deep breaths after surgery.	Yes No	5 4 3 2 1

**5 - Very Important 4 - Important 3 - Moderately Important 2 - Somewhat Important  
1 - Not Important**

**5 - Very Important   4 - Important   3 - Moderately Important   2 - Somewhat Important  
1 - Not Important**

<b><u>Before</u> surgery, NURSES HAD ME:</b>	<b>Received this teaching (circle yes or no)</b>	<b>Importance of receiving this teaching</b>
18. Practice deep breathing	Yes No	5 4 3 2 1
19. Practice coughing.	Yes No	5 4 3 2 1
20. Practice techniques of supporting my incision area when moving in bed or coughing.	Yes No	5 4 3 2 1

**Before surgery, NURSES:**

21. Provided information that helped me reduce my concerns about surgery.	Yes No	5 4 3 2 1
22. Told me that I might briefly feel cold and hear loud noises when I first entered the surgery room.	Yes No	5 4 3 2 1
23. Told me what room I would go to after surgery.	Yes No	5 4 3 2 1
24. Encouraged me to request assistance whenever I needed it.	Yes No	5 4 3 2 1

**Before surgery, NURSES EXPLAINED:**

25. Why they were doing before surgery procedures such as, giving me an injection & asking me to empty my bladder.	Yes No	5 4 3 2 1
26. An anesthesiologist would visit me before surgery to discuss what anesthesia would be used.	Yes No	5 4 3 2 1
27. My incision may pull, burn, or itch while it is healing.	Yes No	5 4 3 2 1
28. The hospital has chaplains available to visit patients and their families if this is desired.	Yes No	5 4 3 2 1

**5 - Very Important   4 - Important   3 - Moderately Important   2 - Somewhat Important  
1 - Not Important**

**5 - Very Important 4 - Important 3 - Moderately Important 2 - Somewhat Important  
1 - Not Important**

<b><u>Before</u> surgery, NURSES EXPLAINED</b>	<b>Received this teaching (circle yes or no)</b>		<b>Importance of receiving this teaching</b>				
29. They would frequently check any tubes used to drain urine or stomach contents after surgery.	Yes	No	5	4	3	2	1

**Before surgery, NURSES:**

30. Helped me understand that I might have feeling of uneasiness and change as part of my hospital experience.	Yes	No	5	4	3	2	1
31. Provided reassurance by being available before my surgery.	Yes	No	5	4	3	2	1
32. Told me that immediately after surgery I might be able to hear things before I could open my eyes and move around.	Yes	No	5	4	3	2	1
33. Provided me with information on how to avoid possible problems like pneumonia.	Yes	No	5	4	3	2	1
34. Reassured me that my family could see me soon after surgery.	Yes	No	5	4	3	2	1

**Before surgery, NURSES EXPLAINED:**

35. Receiving medication after surgery to lessen surgical discomfort would help me rest & heal.	Yes	No	5	4	3	2	1
36. I might have tubes to provide fluids (I.V.), drain urine (catheter), or drain stomach contents (N.G.) after surgery.	Yes	No	5	4	3	2	1
37. I might need a plastic tube or mask to help me breathe after surgery.	Yes	No	5	4	3	2	1
38. They would monitor my fluid intake and urine output after surgery.	Yes	No	5	4	3	2	1

**5 - Very Important 4 - Important 3 - Moderately Important 2 - Somewhat Important  
1 - Not Important**



5 - Very Important 4 - Important 3 - Moderately Important 2 - Somewhat Important  
1 - Not Important

<b>Before surgery, NURSES:</b>	<b>Received this teaching (circle yes or no)</b>		<b>Importance of receiving this teaching</b>				
39. Told me I might feel sick to my stomach the first few hours after surgery.	Yes	No	5	4	3	2	1
40. Told me I might have a backache or aches in my arms and legs for a while after surgery.	Yes	No	5	4	3	2	1
41. Told me I might have a headache upon awakening from surgery.	Yes	No	5	4	3	2	1
42. Told me that I might have a cramping feeling in muscles after surgery.	Yes	No	5	4	3	2	1
43. Told me that I might feel lightheaded the first time I stood up after surgery.	Yes	No	5	4	3	2	1
44. Told me I might notice more pain when I first got up and moved around.	Yes	No	5	4	3	2	1
45. Provided reassurance by expressing concern that my needs were met prior to surgery.	Yes	No	5	4	3	2	1
46. Provided me with information about how long pain or discomfort will last after surgery.	Yes	No	5	4	3	2	1
47. Encouraged me to make decisions regarding my care in the hospital.	Yes	No	5	4	3	2	1
48. Helped me identify what care I might need after being discharged from the hospital.	Yes	No	5	4	3	2	1

**Before surgery, NURSES EXPLAINED:**

49. I would be expected to get out of bed and walk a short distance the day I came back from surgery.	Yes	No	5	4	3	2	1
50. Why I needed to walk soon after surgery.	Yes	No	5	4	3	2	1

5 - Very Important 4 - Important 3 - Moderately Important 2 - Somewhat Important  
1 - Not Important

**5 - Very Important   4 - Important   3 - Moderately Important   2 - Somewhat Important  
1 - Not Important**

<b><u>Before</u> surgery, NURSES EXPLAINED:</b>	<b>Received this teaching (circle yes or no)</b>	<b>Importance of receiving this teaching</b>
51. I may feel tired for several weeks after surgery as I resume my normal activities.	Yes   No	5   4   3   2   1
52. I may feel down or depressed for a while after surgery.	Yes   No	5   4   3   2   1
53. I would be expected to tell them if I noticed changes in how I was feeling after surgery.	Yes   No	5   4   3   2   1
54. I could be given pain medication before having to do activities like walking or coughing.	Yes   No	5   4   3   2   1
55. That telling a nurse about my discomfort after surgery would help them determine which of the pain medications ordered by my doctor would best relieve my discomfort.	Yes   No	5   4   3   2   1
56. They would frequently check my surgical dressings after surgery.	Yes   No	5   4   3   2   1
57. Receiving medication after surgery to lessen surgical discomfort would help me to do activities that will prevent problems.	Yes   No	5   4   3   2   1
58. Ways to decrease my discomfort after surgery in addition to using pain medication.	Yes   No	5   4   3   2   1
59. I would be expected to care for my incisional area after discharge.	Yes   No	5   4   3   2   1
60. How long it would take for my incision to heal.	Yes   No	5   4   3   2   1

**5 - Very Important   4 - Important   3 - Moderately Important   2 - Somewhat Important  
1 - Not Important**

**5 - Very Important   4 - Important   3 - Moderately Important   2 - Somewhat Important  
1 - Not Important**

<b><u>Before</u> surgery, NURSES EXPLAINED:</b>	<b>Received this teaching (circle yes or no)</b>	<b>Importance of receiving this teaching</b>
61. How long I might be in the hospital after surgery.	Yes   No	5   4   3   2   1
62. I would be expected to identify what information I would need about resuming activities after discharge.	Yes   No	5   4   3   2   1

**5 - Very Important   4 - Important   3 - Moderately Important   2 - Somewhat Important  
1 - Not Important**

63. What additional pre-operative teaching do you wish you had had before going to surgery?  
Please list what you would have liked to know.

There are a number of types of preoperative teaching provided by nurses. We are interested in how important you believe each type of pre-operative teaching is and when it may best be provided to help people cope with the experience of surgery.

Below is a list describing types of pre-operative teaching and a choice of times when a nurse could do the teaching. Please do the following: (1) **Rank** the types of pre-operative teaching listed (#64 through 70) in order of importance to you from 7 (most) to 1 (least important), using each number only once; and (2) for each type **check** when the nurses should do this teaching to be most helpful for patients having surgery.

**Types of Pre-Operative Teaching Provided by Nurses** (put a number on the line for each type, ranking it from 7 (most important) to 1 (least important)).  
Use each number only once.

**Time Teaching Should be Done**  
(For each definition, check the box below indicating the time you believe that type of pre-operative teaching should be given).

Teaching about:	Before admit to hospital	After admit to hospital but before surgery	At the time even or procedure occurred
___ 64. Care nurses give before surgery.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___ 65. The what, where, and why of events experienced and equipment used .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___ 66. When events and procedures would occur and in what order they would occur .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___ 67. What events and procedures would feel like .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___ 68. What I would be expected to do before and after surgery to speed recovery .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___ 69. Expressing concerns or worries about surgery and finding ways to cope with the surgery experience.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___ 70. New skills such as coughing and deep breathing to help prevent complications after surgery.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PATIENT INFORMATION

Please complete the following:

A. Age: \_\_\_\_\_

B. Sex:  
\_\_\_\_ Female  
\_\_\_\_ Male

C. What is the highest grade of school you have completed (please circle the number of your answer).

- 1) Elementary grades (grades 0-8)
- 2) Some high school (grades 9+ but no graduation)
- 3) High school graduation or GED
- 4) Some college but no degree
- 5) Bachelor's degree
- 6) Graduate degree

D. Please write in the title of your current job or occupation. (if retired, please indicate job you had before retirement.)

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E. Please identify on the lines below, the surgical procedure you just had.

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F. Have you been admitted to a hospital for surgery within the last 5 years?

\_\_\_\_ Yes                      \_\_\_\_ No

**Thank you for your help. We will use the information to improve the teaching nurses provide patients before surgery.**

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### VITA

Cheryl Anne Reilly, daughter of John A. and Kathleen E. Reilly, was born October 31, 1954 in Staten Island, New York. She received a Diploma in Nursing in August, 1978 from St. Vincent's Medical Center of Richmond, School of Nursing, Staten Island, New York. She obtained a Bachelor of Science degree in Nursing when she graduated with honors from the College of Staten Island, Staten Island, New York in 1986.

She began her nursing career on a medical unit at New York University Medical Center, New York, New York. In October, 1979 Cheryl became an Operating Room nurse at the Staten Island Hospital, Staten Island, New York. Over the next eight years she held positions from staff nurse to nurse manager. She was commissioned as a United States Army Reserve Officer in April 1981 and assigned to the 343rd Evacuation Hospital at Fort Hamilton, Brooklyn, New York. In January 1988 she returned to New York University Medical Center. From August 1990 through April 1992 she specialized in open heart surgery at St. Francis hospital, Roslyn, New York. In April 1992 Cheryl was commissioned as an active duty officer in the United States Air Force Nurse Corps and assigned to the operating room at Wilford Hall Medical Center, San Antonio, Texas. She started at Wilford Hall Medical Center as a staff nurse and then became the Personnel Utilization Officer and Nurse Manager, Weekend Day Shift. Cheryl is an active member of the Association of Operating Room Nurses (AORN) and achieved Certification in Operating Room Nursing from AORN in 1982. In 1996 she was inducted into the Delta Alpha Chapter of Sigma Theta Tau International Honor Society of Nursing.

Cheryl was accepted into the Nursing Master's degree program at the University of Texas Graduate School of Biomedical Sciences at San Antonio in 1994. In 1996 she was selected and funded through the Air Force Institute of Technology to complete a Master's in Acute Nursing Care of the Adult with a Perioperative focus, at the University of Texas Graduate School of Biomedical Sciences.